

QUICK REVIEW P.5

In Exercises 1–4, expand the product.

1. $(3x - 4)^2$
2. $(2x + 3)^2$
3. $(2x + 1)(3x - 5)$
4. $(3y - 1)(5y + 4)$

In Exercises 5–8, factor completely.

5. $25x^2 - 20x + 4$
6. $15x^3 - 22x^2 + 8x$
7. $3x^3 + x^2 - 15x - 5$
8. $y^4 - 13y^2 + 36$

In Exercises 9 and 10, combine the fractions and reduce the resulting fraction to lowest terms.

9. $\frac{x}{2x + 1} - \frac{2}{x + 3}$
10. $\frac{x + 1}{x^2 - 5x + 6} - \frac{3x + 11}{x^2 - x - 6}$

SECTION P.5 EXERCISES

In Exercises 1–6, solve the equation graphically by finding x -intercepts. Confirm by using factoring to solve the equation.

1. $x^2 - x - 20 = 0$
2. $2x^2 + 5x - 3 = 0$
3. $4x^2 - 8x + 3 = 0$
4. $x^2 - 8x = -15$
5. $x(3x - 7) = 6$
6. $x(3x + 11) = 20$

In Exercises 7–12, solve the equation by extracting square roots.

7. $4x^2 = 25$
8. $2(x - 5)^2 = 17$
9. $3(x + 4)^2 = 8$
10. $4(u + 1)^2 = 18$
11. $2y^2 - 8 = 6 - 2y^2$
12. $(2x + 3)^2 = 169$

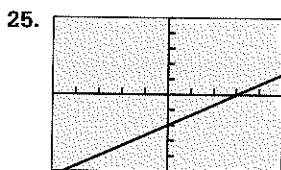
In Exercises 13–18, solve the equation by completing the square.

13. $x^2 + 6x = 7$
14. $x^2 + 5x - 9 = 0$
15. $x^2 - 7x + \frac{5}{4} = 0$
16. $4 - 6x = x^2$
17. $2x^2 - 7x + 9 = (x - 3)(x + 1) + 3x$
18. $3x^2 - 6x - 7 = x^2 + 3x - x(x + 1) + 3$

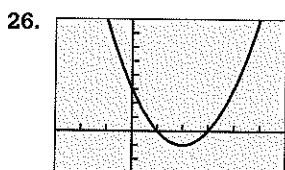
In Exercises 19–24, solve the equation using the quadratic formula.

19. $x^2 + 8x - 2 = 0$
20. $2x^2 - 3x + 1 = 0$
21. $3x + 4 = x^2$
22. $x^2 - 5 = \sqrt{3}x$
23. $x(x + 5) = 12$
24. $x^2 - 2x + 6 = 2x^2 - 6x - 26$

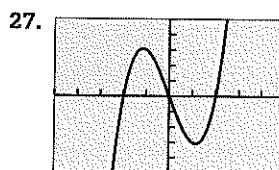
In Exercises 25–28, estimate any x - and y -intercepts that are shown in the graph.



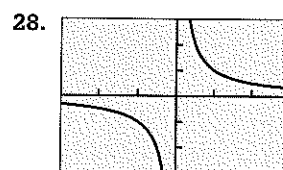
$[-5, 5]$ by $[-5, 5]$



$[-3, 6]$ by $[-3, 8]$



$[-5, 5]$ by $[-5, 5]$



$[-3, 3]$ by $[-3, 3]$

In Exercises 29–34, solve the equation graphically by finding x -intercepts.

29. $x^2 + x - 1 = 0$
30. $4x^2 + 20x + 23 = 0$
31. $x^3 + x^2 + 2x - 3 = 0$
32. $x^3 - 4x + 2 = 0$
33. $x^2 + 4 = 4x$
34. $x^2 + 2x = -2$

In Exercises 35 and 36, the table permits you to estimate a zero of an expression. State the expression and give the zero as accurately as can be read from the table.

35.

X	Y1
4	-.04
41	-.0119
42	-.0154
43	.0449
44	.0736
45	.1025
46	.1316

Y1 $X^2 + 2X - 1$

36.

X	Y1
-1.735	-.0177
-1.734	-.017
-1.733	-.0057
-1.732	3E-4
-1.731	.0053
-1.73	.01238
-1.729	.01925

Y1 $X^2 - 3X$

In Exercises 37 and 38, use tables to find the indicated number of solutions of the equation accurate to two decimal places.

37. Two solutions of $x^2 - x - 1 = 0$
38. One solution of $-x^3 + x + 1 = 0$

In Exercises 39–44, solve the equation graphically by finding intersections. Confirm your answer algebraically.

39. $|t - 8| = 2$
40. $|x + 1| = 4$
41. $|2x + 5| = 7$
42. $|3 - 5x| = 4$
43. $|2x - 3| = x^2$
44. $|x + 1| = 2x - 3$